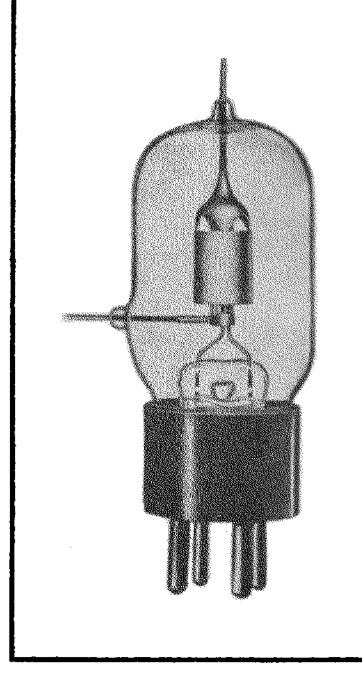


EITEL-McCULLOUGH, INC.
SAN BRUNO, CALIFORNIA

3C24

MEDIUM-MU TRIODE
•
MODULATOR
OSCILLATOR
AMPLIFIER



GENERAL CHARACTERISTICS

Electrical

Filament: Thoriated tungsten

Voltage	6.3 volts
Current	3.0 amperes
Amplification Factor (Average)	23
Direct Interelectrode Capacitances (Average)	
Grid-Plate	1.5 μμf
Grid-Filament	1.7 μμf
Plate-Filament	0.3 μμf
Transconductance (I_b=25 ma., E_b=1000, e_c=–20)	2500 μmhos

Mechanical

Base	(Small 4-pin bayonet) RMA type M8-071
Basing	RMA type 2D
Maximum Overall Dimensions:	
Length	4.38 inches
Diameter	1.44 inches
Net weight	1.00 ounce
Shipping weight (Average)	1.25 pounds

Audio Frequency Power Amplifier and Modulator
Class B

	Typical Operation—2 Tubes				Max. Rating	
D-C Plate Voltage	750	1000	1500	2000	2000	volts
Max.-Signal D-C Plate Current, per tube*	•	•	•	•	75	ma.
Plate Dissipation, per tube*	•	•	•	•	25	watts
D-C Grid Voltage (approx.)	–20	–30	–60	–85		volts
Peak A-F Grid Input Voltage	230	230	250	290		volts
Zero-Signal D-C Plate Current	43	32	21	16		ma.
Max.-Signal D-C Plate Current	133	120	94	80		ma.
Max.-Signal Driving Power (approx.)	2.0	1.7	1.2	1.1		watts
Effective Load, Plate-to-Plate	9200	15800	33700	55500		ohms
Max.-Signal Plate Power Output	50	70	90	110		watts

*Averaged over any sinusoidal audio frequency cycle.

Radio Frequency Power Amplifier and Oscillator
Class-C *Telegraphy
(Key down conditions without modulation)

	Typical Operation—1 Tube			Max. Rating	
D-C Plate Voltage	1000	1500	2000	2000	volts
D-C Plate Current	72	67	63	75	ma.
D-C Grid Current	15	15	17	25	ma.
D-C Grid Voltage	–80	–110	–170		volts
Plate Power Output	47	75	100		watts
Plate Input	72	100	125		watts
Plate Dissipation	25	25	25	25	watts
Peak R. F. Grid Input Voltage, (approx.)	200	225	295		volts
Driving Power, (approx.)	2.6	3.1	4.5		watts

*The above figures show actual measured tube performance, and do not allow for variations in circuit losses.

EIMAC 3C24 CONSTANT CURRENT CHARACTERISTICS

GRID VOLTAGE—VOLTS

-300 -200 -100 0 100 200 300 400 500

PLATE VOLTAGE— VOLTS

0 250 500 750 1000 1250 1500 1750 2000 2250 2500 2750 3000 3250

GRID CURRENT-MILLIAMPERES

10 20 20 50 100 150 200 250 300 350 400 450

PLATE CURRENT-MILLIAMPERES

0 50 100 200 300 400 500 600 700 800 900 1000

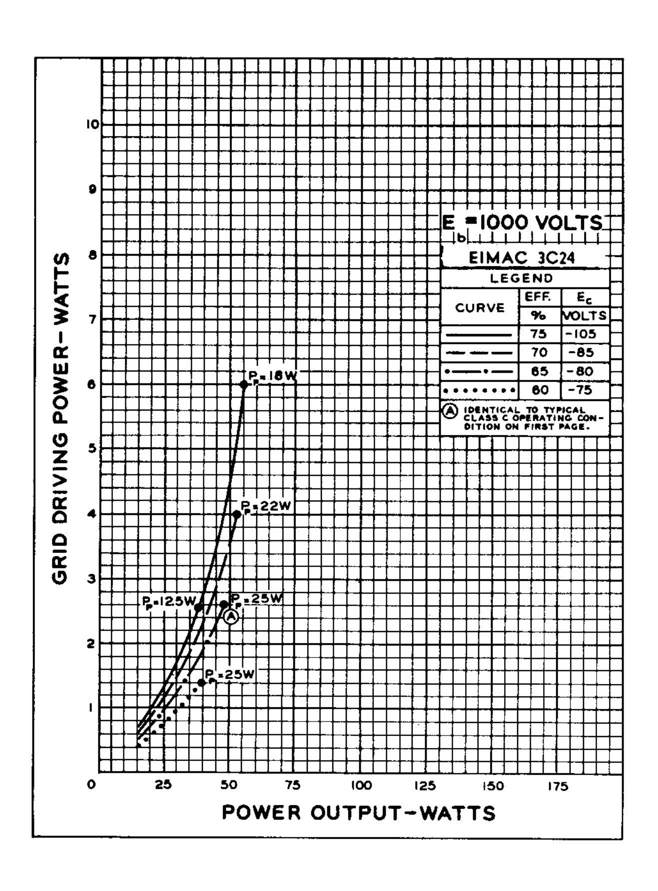
DRIVING POWER vs. POWER OUTPUT

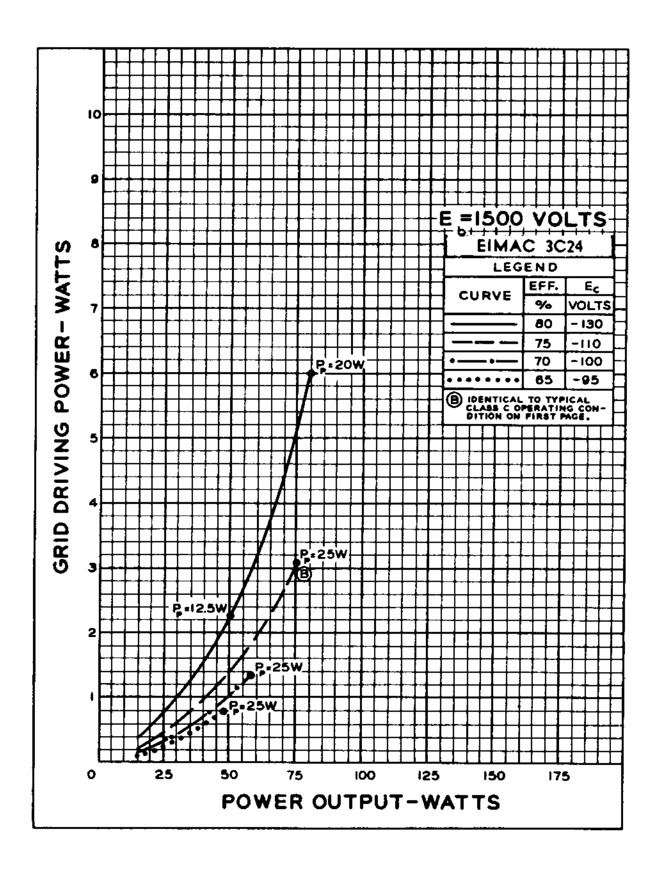
•

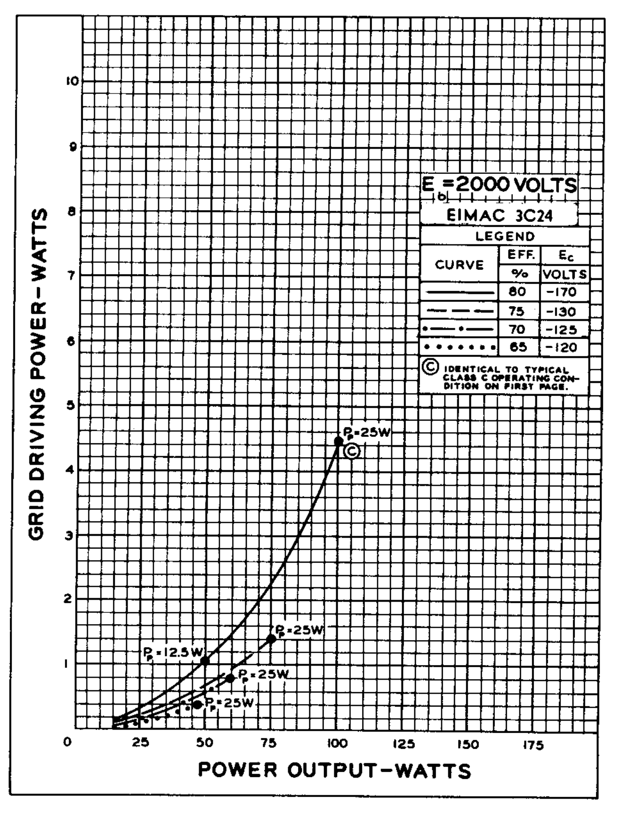
The three charts on this page show the relationship of plate efficiency, power output and grid driving power at plate voltages of 1000, 1500 and 2000 volts. These charts show combined grid and bias losses only. The driving power and power output figures do not include circuit losses. The plate dissipation in watts is indicated by P_p.

Points A, B, and C are identical to the typical Class C operating conditions shown on the first page under 1000, 1500, and 2000 volts respectively.

•









3C24

.048 ±.003

5/16 MIN.

PLATE

2 1/8 ± 3/16

3 9/16 ± 3/16

1 7/16 MAX.

GRID

4 3/16 ± 3/16

.048±.003

RMA BASE
NO. M8-071

5/16 MIN.

1 3/16 ± 1/8

FILAMENT

FILAMENT

4 1

3 2

NC

NC

2D

1-D6-21728